Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762, and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket N0. 06-229
	)	
Amendment of Part 90 of the Commission's Rules	)	WP Docket No. 07-100

COMMENTS OF EF JOHNSON TECHNOLOGIES, INC.

EF Johnson Technologies, Inc. would like to file comments in response to several of the questions posed in the *Fourth Further Notice of Proposed Rulemaking* in the above captioned proceeding.

EF Johnson Technologies, a privately held company, a holding of Francisco Partners, and is a provider of Private Land Mobile systems and equipment, with offices in Irving, TX, Lincoln, NE, and Waseca, MN. EF Johnson Technologies has been a provider of radio equipment for 87 years, with a history of private radio equipment manufacturing for over forty years. EF Johnson Technologies focuses on innovating, developing, and marketing secure communications solutions to organizations whose mission is to protect and save lives. The Company's products are marketed under the EFJohnson and Transcrypt International names, and include Project 25 compliant two-

way radios and communication system infrastructure, as well as voice encryption products.

EF Johnson Technologies applauds the Commission on the decisions of the *Third Report and Order*. Choosing and mandating a common technology platform for a Public Safety broadband network is a positive step toward technology interoperability. Unlike the commercial marketplace, Public Safety communications is a limited size market. By mandating a common over-the-air technology, further fragmentation of an already small market will be avoided. It is further anticipated that that demands of Public Safety will mandate specialized user equipment. This could include environmentally hardened equipment, devices with specialized applications, and integration of broadband devices with existing narrowband equipment. The decision for a common technology platform will enable such devices to be manufactured in a cost effective manner.

As an initial comment, EF Johnson agrees with the Commission's desire to adopt the Department of Homeland Security Office of Interoperability and Compatibility definition of interoperability. We believe that this more general statement better reflects the end goal of interoperability between Public Safety users for communications on demand and when needed and authorized.

With respect to questions regarding architectural framework and guiding principles, we believe that it is important to establish and enforce a set of architectural principles from the beginning. In order to ensure that networks are initially deployed and

continue to exist with the assurance of interoperability it is paramount that these principles be upheld. We believe that the principles of section A.2, and particularly the list of characteristics of paragraph 17 are a reasonable set of requirements to accomplish this. We believe that these requirements be enforced from the initial deployments of the first networks.

With respect to the question of open standards, we believe that open standards are crucial to enabling competition. We believe that within this marketplace, characterized by a limited size, open standards will allow and encourage multiple manufacturers to develop products that are innovative and diverse in feature and function, while maintaining interoperability among the various products. Further fragmenting the market with proprietary standards would only result in limitation of competition and a resulting loss of product diversity and capability.

The Notice of Proposed Rulemaking asks for comment concerning Out-of-Band-Emissions (OOBE) requirements for this portion of the spectrum. We agree with the assertion that, with the appropriate guard-band in place, and with current OOBE requirements already placed on existing narrowband equipment, the broadband spectrum should be adequately protected from interference from adjoining systems. However, as manufactures and suppliers of narrowband equipment in the 700 MHz band, we are concerned that interference from the broadband spectrum should also not be allowed to degrade critical narrowband communications. We are concerned that the proposed limits of 43 + 10 log (P) may not be sufficient to protect these narrowband systems that are

designed, primarily as noise limited systems. Even with guard-band separation, we feel that the proposed OOBE limits may not be sufficient to protect vital narrowband communications, and suggest reconsideration for further interference protection of narrowband systems.

Section 12 of the Notice of Proposed Rulemaking requests comment on a standardized set of applications. EF Johnson also believes that it is important to interoperability for networks to implement a baseline set of applications. We believe that the proposed set of five applications is a good collection of applications, and represent a desirable minimal set to ensure interoperability.

Section 13 of the Notice of Proposed Rulemaking requests comment on Interconnection with Legacy Public Safety Networks. EF Johnson believes that legacy narrowband Public Safety networks will have useful life for many years to come, and will continue to be a vital communications link even after the successful deployment of broadband systems. With more and more narrowband systems migrating to digital operation, and with most of those embracing standardized systems, such as Project 25, the possibility of interconnection between narrowband and broadband systems is technically feasibility. While narrowband systems generally do not have the capacity to transport vast amounts of data, there are several applications, including status messaging, location services, and over-the-air-rekeying (OTAR) that are of increasing importance. We envision gateways between systems that would transport such data. More importantly, voice services between networks are critical, and may represent the bulk of

traffic between narrowband and broadband systems. With both types of systems relying heavily on the use of internet protocol standards, we believe that in the long run, both narrowband and broadband systems will use a common data network as a transport mechanism.

As a final area of comment, section 21 of the Notice of Proposed Rulemaking asks for comment on incumbent narrowband operation in the proposed broadband spectrum. We believe that the Commission correctly required waiver recipients to protect incumbent narrowband operation either through engineering measures, or through relocation at the waiver recipient's expense. We believe that continued protection of the narrowband incumbents is needed to ensure uninterrupted operation. We believe that it should be the responsibility of broadband licensees to ensure that a permanent relocation of narrowband incumbents is accomplished. We believe, however, that should the Commission adopt a relocation funding mechanism, broadband operators should be reimbursed for relocation expenses.

EF Johnson Technologies would like to express its appreciation to the Commission for the opportunity to provide comment on these matters.

Respectfully Submitted,

/S/ John S. Oblak
John S. Oblak
VP, Standards and Regulatory Affairs
EF Johnson Technologies
123 North State St.
Waseca, MN 56093

April 11, 2011